

BEFORE THE  
**Federal Communications Commission**  
WASHINGTON, DC 20554  
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In the Matter of )

Revision of the Commission's Rules to Ensure )  
Compatibility with Enhanced 911 Emergency )  
Calling Systems )

CC Docket No. 94-102

RECEIVED

Wireless Telecommunications Bureau Requests )  
Targeted Comment on Wireless E911 Phase II )  
Automatic Location Identification )  
Requirements )

DA 99-1049

JUN 17 1999

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

To: Chief, Wireless Telecommunications Bureau

**COMMENTS**

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## SUMMARY

BellSouth Corporation ("BellSouth") opposes any proposals that would impose rigid deadlines tailored specifically to the deployment of location-capable handsets by carriers choosing handset-based solutions to the Commission's Phase II automatic location identification ("ALI") requirements. The deadlines proposed by SnapTrack and APCO are inconsistent with the approach to Phase II ALI deployment set forth in the Commission's rules. Section 20.18 does not set a concrete deadline for completing the implementation of Phase II ALI. Instead, the rule contemplates that the actual deployment of Phase II ALI will occur when public safety answering points ("PSAPs") are ready to use the ALI and a cost recovery mechanism has been adopted. The imposition of the deadlines proposed by SnapTrack and APCO will require carriers opting for handset-based solutions to deploy location-capable handsets even if PSAPs are incapable of using the information supplied for the handsets. Such deadlines are nonsensical.

Moreover, the imposition of the proposed deadlines may preclude the deployment of handset solutions. The rate at which location-capable handsets are deployed will depend upon consumer demand for the handsets. Carriers will not opt for handset-based solutions if they must predict how rapidly consumers will acquire location-capable handsets, especially if carriers are required to foot the bill for replacing older handsets with location-capable handsets if consumer demand for the handsets is lacking. Quite simply, the demand for these handsets is beyond carrier control.

Implementation of Phase I ALI has been a difficult and time-consuming process for carriers and PSAPs alike. Although cost recovery mechanisms are now in place in numerous states, a number of PSAPs are just beginning to implement Phase I. Like Phase I, Phase II implementation will depend upon PSAP readiness for the location information. Because the cost and complexity of Phase II implementation will be much greater than Phase I implementation, it is unlikely that many PSAPs will be ready for Phase II ALI on October 1, 2001. In this regard, rather than adopt arbitrary deadlines established specifically for the deployment of location-capable handsets, the implementation of handsets should be dependent upon PSAP demands for Phase II ALI. At a minimum, a carrier should not be obligated to deploy substantial numbers of location-capable handsets until a substantial number PSAPs within the carrier's service area are capable of utilizing Phase II ALI.

Finally, the Commission should not adopt special accuracy and reliability standards for handset solutions. SnapTrack proposes that the FCC specify that handset-based solutions may be deployed only if they provide ALI within 90 meters using circular error probability. No rationale has been provided for subjecting potential handset-based solutions to this standard. This standard is based on the parameters of SnapTrack's system and may preclude the use of competing systems that provide better accuracy and reliability than required by the Commission's rules, but do not quite meet SnapTrack's accuracy requirement. Thus, a competing system providing 95 meter accuracy would be precluded even if it offered other public interest benefits such as better reliability and lower cost. Such a result is inconsistent with the Commission's decision to remain technologically neutral and to promote the use of various technologies for the provision of Phase II ALI.

## TABLE OF CONTENTS

|                                                                                                                                   |   |
|-----------------------------------------------------------------------------------------------------------------------------------|---|
| SUMMARY .....                                                                                                                     | i |
| I. THE “DEADLINE” FOR THE PROVISION OF AUTOMATIC LOCATION IDENTIFICATION BY CMRS CARRIERS IS CONTINGENT UPON PSAP READINESS ..... | 2 |
| II. THE COMMISSION SHOULD NOT ADOPT A DEPLOYMENT SCHEDULE FOR ALI CAPABLE HANDSETS .....                                          | 4 |
| III. THE COMMISSION SHOULD NOT ADOPT DIFFERENT ACCURACY AND RELIABILITY STANDARDS FOR HANDSET-BASED SOLUTIONS .....               | 7 |
| CONCLUSION .....                                                                                                                  | 9 |

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To: Chief, Wireless Telecommunications Bureau

**COMMENTS**

Pursuant to the Wireless Telecommunications Bureau's ("Bureau") *Public Notice*, dated June 1, 1999,<sup>1</sup> BellSouth Corporation ("BellSouth"), on behalf of its affiliates and subsidiaries, hereby submits these comments on the proposals submitted by SnapTrack and APCO regarding the use of handset-based solutions to the Commission's wireless enhanced 911 ("E911") automatic location identification ("ALI") requirements. BellSouth has no vested interest in a particular technological solution for the provision of Phase II ALI and remains undecided whether to deploy a network or handset solution. In general, BellSouth supports the

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<sup>1</sup> *Wireless Telecommunications Bureau Requests Targeted Comment on Wireless E911 Phase II Automatic Location Identification Requirements*, CC Docket No. 94-102, *Public Notice*, DA 99-1049 (June 1, 1999) ("*Public Notice*").

Commission's efforts to ensure that its rules are "technologically and competitively neutral."<sup>2</sup> In this regard, BellSouth opposes modifications to the Commission's E911 rules that (i) would force carriers opting for handset-based ALI solutions to meet rigid deployment schedules, or (ii) would specify unique accuracy and reliability standards for handset solutions to the Phase II ALI requirements.

**I. THE "DEADLINE" FOR THE PROVISION OF AUTOMATIC LOCATION IDENTIFICATION BY CMRS CARRIERS IS CONTINGENT UPON PSAP READINESS**

Section 20.18 of the Commission's rules requires the provision of ALI in two stages.<sup>3</sup>

Under Phase I, which became effective April 1, 1998, CMRS carriers must provide the location of the cell site receiving a 911 call to eligible PSAPs.<sup>4</sup> Under Phase II, which becomes effective October 1, 2001, CMRS carriers must supply the "location of a 911 call by longitude and latitude within a radius of 125 meters using root mean square ("RMS") techniques"<sup>5</sup> to eligible PSAPs. PSAPs are eligible for Phase I and Phase II ALI if the following conditions are met: (i) the administrator of the PSAP has requested the information, (ii) the PSAP is capable of using the

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<sup>2</sup> *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, *Memorandum Opinion and Order*, 12 F.C.C.R. 22665, 22725 (1997) ("E911 MO&O").

<sup>3</sup> 47 C.F.R. §§ 20.18(d), (e).

<sup>4</sup> 47 C.F.R. § 20.18(d).

<sup>5</sup> 47 C.F.R. § 20.18(e). The Commission specified that Phase II requires carriers to have the "capability to identify the latitude and longitude of a mobile unit making a 911 call, within a radius of no more than 125 meters in 67 percent of all cases." *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 F.C.C.R. 18676, 18712 (1996) ("E911 Report and Order"); *Memorandum Opinion and Order*, 12 F.C.C.R. 22665, 22726 (1997) ("E911 MO&O").

information, and (iii) a mechanism for recovering the costs of implementing an ALI system has been established.<sup>6</sup>

Many parties mistakenly refer to the dates referenced in Section 20.18 as implementation “deadlines.” These dates do not create “deadlines,” however, for *completing* the implementation of Phase I and Phase II ALI systems. Section 20.18 merely establishes dates upon which CMRS carriers must *begin* offering Phase I and Phase II ALI to eligible PSAPs. The rules were designed to ensure that ALI implementation occurs at the pace set by PSAPs. Specifically, despite the dates referenced in the rules, carriers are not required to implement ALI — whether Phase I or Phase II — until a PSAP has requested the information and a cost recovery mechanism is in place.

Moreover, carriers are not required to deploy ALI system-wide once a PSAP has requested ALI. Rather, carriers are required to deploy ALI *only* in areas covered by a requesting PSAP. It thus is permissible for carriers to deploy ALI in a patchwork fashion — only in areas served by a requesting PSAP — if such a phased-in approach is cost effective. Accordingly, the implementation of Phase I and Phase II ALI may not be fully completed by carriers until all PSAPs have requested the information, a process that could take years.

The date associated with Phase I ALI has come and gone, yet many PSAPs have not requested Phase I ALI. BellSouth anticipates further growth in PSAP requests for Phase I ALI now that cost recovery legislation has been passed in all of the states in which BellSouth operates wireless systems.<sup>7</sup> Nevertheless, a number of administrative issues remain for PSAPs, such as

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<sup>6</sup> 47 C.F.R. § 20.18(f).

<sup>7</sup> Funds are currently being collected in eleven of these thirteen states to offset the cost of providing ALI.

training personnel, before they are capable of utilizing Phase I information. Thus, it still may be a considerable time before Phase I is fully implemented.

From the PSAP perspective, implementation of Phase II is more costly and complex than Phase I. Many PSAPs may be reluctant to expend the resources for Phase II implementation so soon after they have expended the resources necessary to utilize Phase I ALI. Thus, it is not evident that there will be widespread implementation of Phase II ALI on October 1, 2001.

## **II. THE COMMISSION SHOULD NOT ADOPT A DEPLOYMENT SCHEDULE FOR ALI CAPABLE HANDSETS**

Given that Section 20.18 ties Phase II implementation to PSAP readiness, the Commission should reject the proposals of SnapTrack and APCO to adopt rigid deployment schedules for carriers adopting handset-based solutions.<sup>8</sup> Adoption of these proposed deployment schedules ignores the reality of ALI. Although it is understandable for the FCC and groups representing PSAPs to want Phase II ALI as soon as possible, the fact remains that not all PSAPs will be ready for this information at the same time. Moreover, the location capabilities of handsets are beneficial only if PSAPs can use the information.

SnapTrack and APCO urge the Commission to ignore these realities and require carriers opting for handset solutions to make location-capable handsets available pursuant to a rigid deployment schedule.<sup>9</sup> Under this approach, carriers would be required to sell only location-capable handsets by a certain date, even if many PSAPs are not capable of using Phase II information on that date.<sup>10</sup> Similarly, APCO would require carriers to ensure that *every phone*

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<sup>8</sup> *Public Notice* at 3.

<sup>9</sup> *Public Notice* at 3.

<sup>10</sup> SnapTrack proposes that carriers opting for handset solutions be required to offer only  
(continued...)

associated with its network be capable of supplying location information by the end of 2005, regardless of the ability of PSAPs to use the information. Absent a corresponding commitment from all PSAPs to use Phase II ALI by certain dates, the imposition of rigid deployment schedules on carriers would be arbitrary and capricious because the usefulness of such phones is contingent upon the ability of PSAPs to utilize the information.

The imposition of specific deployment schedules for carriers opting for handset-based solutions also would be arbitrary because carriers opting for network solutions are not bound by a similar schedule. For example, if a CMRS market is divided into jurisdictions served by a number of different PSAPs, a carrier opting for a network-based solution may deploy the systems necessary to supply Phase II ALI only in the areas served by PSAPs requesting the information — if such an approach proves cost effective. The carrier would not be required to deploy the Phase II capabilities throughout its entire network. Instead, the carrier could deploy the systems and equipment necessary for Phase II ALI on a patchwork basis. As additional PSAPs request Phase II ALI, the carrier would expand the coverage of its network-based solution. Under this approach, the deployment of Phase II ALI is driven by PSAP readiness, rather than regulatory fiat.

SnapTrack and APCO also propose that carriers opting for a handset-based solution be required to offer location-capable handsets on or before January 1, 2001 — ten months before the date specified in Section 20.18. Although the record in this proceeding indicates that location-

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<sup>10</sup> (...continued)

location capable handsets after December 31, 2001. APCO proposes that these carriers be required to ensure that 80 percent of the phones being sold to its customers as of December 31, 2001 are location-capable, with this percentage increasing to 100 percent by December 31, 2002. See *Public Notice* at 3.



capable handsets should be available in advance of October 1, 2001,<sup>11</sup> there is no evidence that such handsets will be available in large quantities on January 1, 2001. The record compiled to date demonstrates that, although standards have yet to be finalized, equipment *should* become available in mid-2000.<sup>12</sup> It is unclear, however, whether these predictions will hold true and, even if accurate, whether manufacturers will be able to supply sufficient numbers of location-capable handsets to permit all carriers desiring a handset solution to acquire sufficient numbers of handsets prior to January 1, 2001. Accordingly, the FCC should not adopt these proposals.

Similarly, the FCC should not require carriers adopting a handset-based approach to “offer either to retrofit or to replace subscriber handsets to make them ALI-capable at the carrier’s expense or, at a minimum, at a very substantial discount, if subscribers have not upgraded their handsets by a certain date.”<sup>13</sup> Such a requirement would be inconsistent with the implementation of safety features in other industries — such as the implementation of air bags in the automotive industry.<sup>14</sup> Except in extraordinary cases, the U.S. government does not require recalls of functional, non-hazardous, consumer goods for retrofitting with new features mandated by new regulations. Indeed, it is questionable whether the Commission has the authority to require the retrofitting of non-defective handsets at a carrier’s expense, particularly when there is no question of carrier liability, and in many cases the handsets were not supplied by carriers. In

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<sup>11</sup> See, e.g., AirTouch Comments and Petition for Waiver of Section 20.18(e) at 10-11 (Feb. 4, 1999); PrimeCo Personal Communications, L.P. Petition for Waiver of Section 20.18(e) at 6 (Feb. 4, 1999); U S WEST Wireless, L.L.C. Petition for Waiver of Section 20.18(e) at 8 (Feb. 4, 1999).

<sup>12</sup> See, e.g., AirTouch Comments and Petition for Waiver at 10-11; PrimeCo Petition at 6; U S WEST Petition at 8.

<sup>13</sup> *Public Notice* at 6.

<sup>14</sup> See Zoltar Ex Parte Reply to Comments at 4 (October 28, 1997).

any event, a requirement that carriers replace handsets that subscribers do not replace by an established date would provide subscribers with the disincentive to trade in their existing phones before that time. Subscribers may opt to wait until the carrier is obligated to foot the bill for the new phone.

### **III. THE COMMISSION SHOULD NOT ADOPT DIFFERENT ACCURACY AND RELIABILITY STANDARDS FOR HANDSET-BASED SOLUTIONS**

The Commission should reject proposals that would impose specific standards on the use of handset-based solutions to the Commission's Phase II ALI requirement.<sup>15</sup> The imposition of such standards is inconsistent with prior Commission action in this docket. Specifically, the Commission has adopted *general* criteria to permit "various technologies to be used in the provision of Phase II ALI."<sup>16</sup> Rather than adopt strict technical standards and other requirements, the Commission merely required carriers to provide ALI capable of locating a caller "within a radius of 125 meters using root mean square ("RMS") techniques."<sup>17</sup> The Commission further specified that the October 1, 2001 implementation deadline would not be applied in a way that "would hamper the development and deployment" of ALI technologies that provide better accuracy and reliability than required by Section 20.18(e).<sup>18</sup>

SnapTrack now proposes to "clarify" what constitutes better accuracy and reliability based on the performance of its equipment in recent tests. Based on these test results, SnapTrack

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<sup>15</sup> See *Public Notice* at 3-5 (citing proposals submitted by SnapTrack and APCO).

<sup>16</sup> See Letter from Daniel B. Phythyon, Chief, Wireless Telecommunications Bureau, FCC, to Pamela J. Riley, Vice President — Federal Regulatory, AirTouch Communications at 1 (October 23, 1998) (citing *E911 Report and Order*, 11 F.C.C.R. at 18714).

<sup>17</sup> 47 C.F.R. § 20.18(e).

<sup>18</sup> *E911 MO&O*, 12 F.C.C.R. at 22725.

suggests that the FCC should only permit the deployment of handset solutions that are capable of providing ALI within 90 meters using circular error probability. No rationale has been provided for subjecting potential handset-based solutions to this standard. Moreover, this standard may preclude the use of competing systems that provide better accuracy and reliability than required by the Commission's rules, but do not quite meet the SnapTrack's accuracy requirement. Thus, a competing system providing 95 meter accuracy would be precluded (because it does not meet SnapTrack's 90 meter accuracy requirement) even if it offered other public interest benefits such as better reliability and lower cost. Such a result is inconsistent with the Commission's decision to remain technologically neutral and to promote the use of various technologies for the provision of Phase II ALI.

Finally, the Commission should not require carriers to use root mean square ("RMS") techniques for determining whether 67 percent of all E911 calls are accurate to within 125 meters.<sup>19</sup> There has been a lot of confusion regarding this requirement and some parties have disputed the desirability of using RMS as a measure of reliability.<sup>20</sup> CEP is a better accuracy measure than RMS<sup>21</sup> and BellSouth supports the clarification sought by the Wireless E9-1-1 Implementation Ad Hoc ("WEIAD") group.<sup>22</sup> Specifically, Section 20.18(e) should be modified to specify the accuracy requirement in the following manner: "Phase II location will be

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<sup>19</sup> See 47 C.F.R. § 20.18(e).

<sup>20</sup> See *Public Notice* at 7; Ericsson Inc. Ex Parte at 4-10 (March 20, 1998); Letter to Magalie Roman Salas, Secretary, FCC, from James R. Hobson, National Emergency Number Association (on behalf of WEIAD), CC Docket No. 94-102, November 25, 1998 ("WEIAD Letter").

<sup>21</sup> For a detailed discussion of the merits of CEP versus RMS, see Ericsson Inc. Ex Parte at 4-10.

<sup>22</sup> See *Public Notice* at 7.


attempted on all 911 calls routed toward a Public Safety Answering Point ("PSAP") and will be accurate to within 125 meters in 67% of these cases."<sup>23</sup> This definition should eliminate the confusion surrounding the Commission's accuracy requirement for Phase II information.

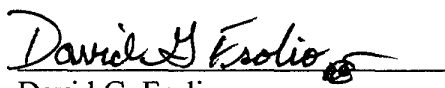
### CONCLUSION

For the foregoing reasons, the Commission should reject the proposals of SnapTrack and APCO regarding deployment schedules and accuracy requirements for handset solutions.

Respectfully submitted,

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<sup>23</sup> See WEIAD Letter at 4. This definition was originally proposed by Ericsson in March 1998. Ericsson Inc. Ex Parte at 4-10.

CERTIFICATE OF SERVICE

I, Brooke Wilding, hereby certify that on this 17th day of June, 1999, copies of the foregoing "Comments of BellSouth Corporation" in CC Docket No. 94-102, in response to DA 99-1049 were served by hand on the following:

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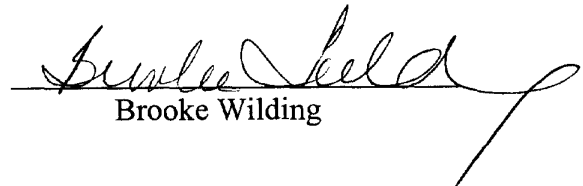
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